

REMARKS

The Examiner is thanked for the thorough review and consideration of the present application. The Final Office Action dated January 11, 2005 has been received and its content carefully reviewed.

By this Response, claims 1 and 16 have been amended, and claims 11-12 and 25-26 have been cancelled without prejudice or disclaimer. Claims 1-10, 13-24 and 27-36 are pending in the application. Reconsideration and withdrawal of the rejections in view of the above amendments and the following remarks are respectfully requested.

In the Office Action, claims 1, 7-16 and 24-29 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicants' Admitted Prior Art (hereafter "APA") in view of U.S. Patent No. 6,507,382, issued to Sakamoto et al. (hereafter "Sakamoto") and U.S. Patent No. 5,581,382, issued to Kim. Applicants traverse the rejection because the present application (Serial No. 09/901,079) and Kim were, at the time of the invention of the present application, made and owned by LG. Philips LCD Co., Ltd. Therefore, Applicants respectfully request that the rejection be withdrawn as Kim is not valid prior art against the claims of the present application.

Applicants further traverse the rejection because neither APA nor Sakamoto, analyzed alone or in any combination, teaches or suggests the combined features recited in the claims of the present application. For example, APA and Sakamoto fail to teach or suggest an in-plane switching liquid crystal display device that includes "a second passivation layer on the first passivation layer, wherein the second passivation layer is an inorganic material" as recited in independent claim 1 of the present application.

Independent claim 16 is directed to a method of fabricating an array substrate for an in-plane switching liquid crystal display device that includes features similar to the display device recited in independent claim 1. Specifically, the method of claim 16 includes "forming a second passivation layer on the first passivation layer, wherein the second passivation layer is an inorganic material."

The Office Action states that APA does not explicitly disclose, among other features, "a second passivation layer on the first passivation layer; ... wherein the second passivation layer is an inorganic material." To compensate for the deficient teachings of APA, the Office Action relies upon Sakamoto (especially embodiment 2) to teach a second passivation layer on the first

passivation layer, and relies upon Kim for teaching the second passivation layer of the liquid crystal display device is an inorganic material. Applicants respectfully disagree.

Applicants note the Office Action has equated the overcoat layer 12 of Sakamoto to the first passivation layer recited in independent claims 1 and 16 of the present application, and the interlayer film 13 to the second passivation layer recited in independent claims 1 and 16 of the present application. Applicants submit Sakamoto fails to teach or suggest the interlayer film 13 “is an inorganic material” as recited in independent claims 1 and 16. Thus, Sakamoto fails to remedy the deficient teachings of APA.

Additionally, Applicants respectfully submit “the teaching or suggestion to make the claimed combination and the reasonable expectation of success must be found in the prior art, and not based on applicant’s disclosure.” *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Further, “the level of skill in the art cannot be relied upon to provide the suggestion to combine reference.” *Al-Site Corp. v. VSI Int’l Inc.*, 50 USPQ2d 1161 (Fed. Cir. 1999).

The Office Action concedes that APA and Sakamoto fail to teach or suggest “wherein the first passivation layer includes a plurality of common line contact holes” and “wherein each common electrode is electrically connected with the common line through a corresponding common line contact hole” as recited in amended, independent claim 1. As illustrated, for example in Fig. 3(b) of Sakamoto, the pixel electrode 14 is connected to the drain electrode via a contact plug 9. However, there is no teaching or suggestion in Sakamoto of a contact hole to connect the common electrodes to a common line as recited in the claims of the present application. Accordingly, there is not proper motivation to combine APA and Sakamoto as suggested in the Office Action to provide a device or method having the combined features recited in independent claims 1 and 16 of the present application.

Because Sakamoto fails to remedy the deficient teachings of APA for at least the above reasons, Applicants respectfully submit independent claim 1 and its dependent claims 7-10 and 13-15, and independent claim 16 and its dependent claims 24 and 27-29 are allowable over any combination of APA and Sakamoto. Reconsideration and withdrawal of the rejection are requested.

In the Office Action, claims 2-3 and 17-20 are rejected under 35 U.S.C. §103(a) as being unpatentable over APA in view of Sakamoto and Kim and further in view of U.S. Patent No. 6,356,328, issued to Shin et al. (hereafter “Shin”). Claims 4 and 23 are rejected under 35 U.S.C.

§ 103(a) as being unpatentable over APA in view of Sakamoto and Kim and further in view of U.S. Patent No. 6,163,355, issued to Chang et al. (hereafter “Chang”). Claims 5-6 and 21-22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over APA in view of Sakamoto and Kim and further in view of U.S. Patent No. 6,414,729, issued to Akiyama et al. (hereafter “Akiyama”). Claims 30 and 31 are rejected under 35 U.S.C. § 103(a) as being unpatentable over APA in view of Sakamoto and Kim and further in view of U.S. Patent No. 6,300,995, issued to Wakagi et al. (hereafter “Wakagi”). Claims 32 and 33 are rejected under 35 U.S.C. § 103(a) as being unpatentable over APA in view of Sakamoto, Kim and Wakagi and further in view of Shin. Claim 34 is rejected under 35 U.S.C. § 103(a) as being unpatentable over APA in view of Sakamoto, Kim and Wakagi and further in view of Chang. And, claims 35 and 36 are rejected under 35 U.S.C. § 103(a) as being unpatentable over APA in view of Sakamoto, Kim, and Wakagi and further in view of Akiyama.

Applicants respectfully traverse the rejections because neither APA, Sakamoto, Kim, Shin, Chang, Akiyama nor Wakagi teach or suggest the combined features of the present application. In particular, APA, Sakamoto, Kim, Shin, Chang, Akiyama and Wakagi fail to teach or suggest “a second passivation layer on the first passivation layer, wherein the second passivation layer is an inorganic material” as recited in independent claim 1; and “forming a second passivation layer on the first passivation layer, wherein the second passivation layer is an organic material” as recited in independent claim 16. By virtue of their dependence from independent claims 1 and 16, claims 2-6 and 17-23 also contain these allowable features of claims 1 and 16.

Additionally, APA, Sakamoto, Kim, Shin, Chang, Akiyama and Wakagi fail to teach or suggest “a third insulation layer on the common electrodes and the second insulation layer, wherein the third insulation layer is an inorganic material” as recited in independent claim 30 of the present application. By virtue of their dependence from independent claim 30, claims 31-36 also include this allowable feature of independent claim 30.

As discussed above, Kim is not valid prior art against the claims of the present application under 35 U.S.C. §103(c). Applicants respectfully submit no combination of APA and Sakamoto teaches the combined features of the present application. Applicants further submit neither Shin, Chang, Akiyama and Wakagi, analyzed in any combination, remedies the deficiencies of APA and Sakamoto Kim to provide motivation to one of ordinary skill in the art

to modify the device of APA to obtain a device and method of fabricating an array substrate for an in-plane switching liquid crystal display that includes the combined features recited in independent claims 1, 16 and 30 of the present application.

Because Shin, Chang, Akiyama and Wakagi fail to teach "a second passivation layer on the first passivation layer, wherein the second passivation layer is an inorganic material" as recited in independent claim 1; "forming a second passivation layer on the first passivation layer, wherein the second passivation layer is an inorganic material" as recited in independent claim 16; or "a third insulation layer on the common electrodes and the second insulation layer, wherein the third insulation layer is an inorganic material" as recited in independent claim 30, Shin, Chang, Akiyama and Wakagi fail to remedy the deficiencies of APA and Sakamoto. Accordingly, independent claim 1 and its dependent claims 2-6, independent claim 16 and its dependent 17-23, and independent claim 30 and its dependent claims 31-36 are allowable over any combination of APA, Sakamoto, Kim, Shin, Chang Akiyama and Wakagi.

Reconsideration and withdrawal of the rejections are respectfully requested.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue. If the Examiner deems that a telephone conversation would further the prosecution of this application, the Examiner is invited to call the undersigned at (202) 496-7500.

Application No.: 09/901,079
Amendment dated April 11, 2005
Reply to Office Action dated January 11, 2005

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If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. §1.136, and any additional fees required under 37 C.F.R. §1.136 for any necessary extension of time, or any other fees required to complete the filing of this response, may be charged to Deposit Account No. 50-0911. Please credit any overpayment to deposit Account No. 50-0911. A duplicate copy of this sheet is enclosed.

Dated: April 11, 2005

Respectfully submitted,

By Valerie Hayes
Valerie Hayes

Registration No.: 53,005
MCKENNA LONG & ALDRIDGE LLP
1900 K Street, N.W.
Washington, DC 20006
(202) 496-7500
Attorney for Applicant